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(54) Method and apparatus for removing artifacts in compressed images

(57) In a method for removing artifacts in a digital image that has been decoded from a compressed representation of the image, the pixels of the digital image are segmented into low detail pixels, high detail pixels, and boundary pixels, and then a single non-linear filtering

method, such as a sigma filtering method, is applied to each pixel in the digital image. By selecting separate filter parameters for the low detail, high detail, and boundary pixels, the removal of artifacts is improved over prior methods.

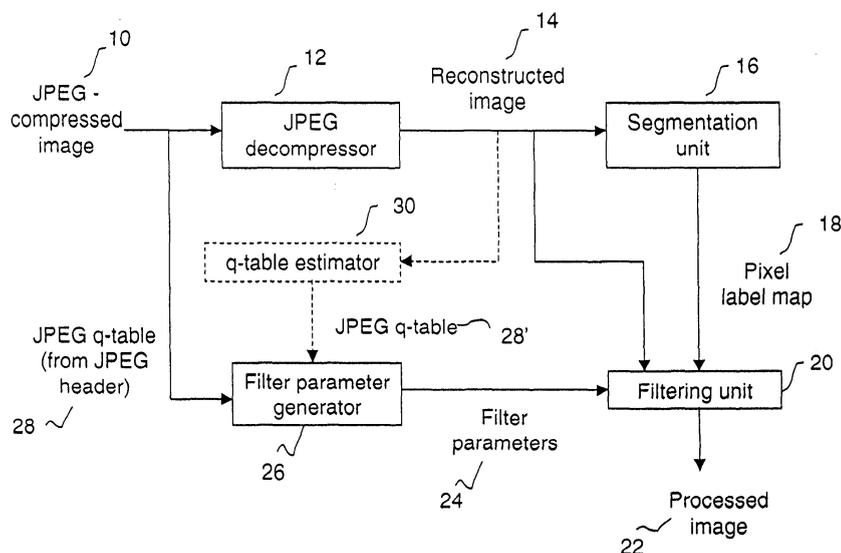


Fig. 1



DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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Y	CAHILL B ET AL: "Locally adaptive deblocking filter for low bit rate video" PROCEEDINGS 2000 INTERNATIONAL CONFERENCE ON IMAGE PROCESSING. ICIP 2000. VANCOUVER, CANADA, SEPT. 10 - 13, 2000, INTERNATIONAL CONFERENCE ON IMAGE PROCESSING, NEW YORK, NY : IEEE, US, vol. VOL. 2 OF 3. CONF. 7, 10 September 2000 (2000-09-10), pages 664-667, XP010530072 ISBN: 0-7803-6298-5 * abstract * * page 664, right-hand column, line 3 - page 666, right-hand column, line 5 * -----	1-5,7, 13,14	
A	COUDOUX F-X ET AL: "Reduction of blocking effect in DCT-coded images based on a visual perception criterion" SIGNAL PROCESSING. IMAGE COMMUNICATION, ELSEVIER SCIENCE PUBLISHERS, AMSTERDAM, NL, vol. 11, no. 3, January 1998 (1998-01), pages 179-186, XP004107301 ISSN: 0923-5965 * sections 2 and 3 * ----- -/--	1-14	TECHNICAL FIELDS SEARCHED (IPC) G06T
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 12 December 2005	Examiner Zamuner, U
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ----- & : member of the same patent family, corresponding document	

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DOCUMENTS CONSIDERED TO BE RELEVANT			
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A	PARK H W ET AL: "A POSTPROCESSING METHOD FOR REDUCING QUANTIZATION EFFECTS IN LOW BIT-RATE MOVING PICTURE CODING" IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS FOR VIDEO TECHNOLOGY, IEEE SERVICE CENTER, PISCATAWAY, NJ, US, vol. 9, no. 1, February 1999 (1999-02), pages 161-171, XP000802295 ISSN: 1051-8215 * abstract * * section III * -----	1-14	
The present search report has been drawn up for all claims			
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**ANNEX TO THE EUROPEAN SEARCH REPORT
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EP 03 07 8456

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82